

MINING SYSTEM

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application is a continuation of prior U.S. Application No. 10/183,741, filed June 26, 2002, which is hereby incorporated herein by reference.

now US 6,796,614

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0002] The present invention relates, in general, to a mining system for extracting mineral deposits, and more specifically, but without limitation, to a mining system utilizing a combination of surface contour mining and underground shortwall or longwall mining systems.

2. Description of Related Art

[0003] Conventional surface mining systems have devastating environmental results. In hilly or mountainous regions, surface contour mining is accomplished by removing timber and clearing the area to be mined, making a strip cut to form a substantially horizontal bench and a vertical highwall that exposes the seam of mineral deposits to be removed. Another technique is to simply remove the entire top portion of the mountain to extract the minerals deposited below.

[0004] Underground mining systems are less damaging to the environment, but more costly and inefficient with lower production rates. When underground mining systems are used to extract mineral or coal deposits from a mineral or coal reserve 10, the reserve 10 is divided into panels 12 as shown in FIGURE 1 which are laid out and developed for both shortwall mining and longwall mining operations. Coal reserves conducive to mining adjacent parallel panels (Panels 1 to 8 as shown in FIGURE 1) are most desirable because they facilitate panel development and allow shorter equipment moves. As can be seen, the panels 12 are generally rectangular in shape having gate entries 14 (a headgate and tailgate) extending along each length, and are all connected at

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